1874MNRAS..35...49D

A and B	P = 52°·6	D = 16″·42	(South, 1823·5)
B and C	330° ±	4″ ±	(new).

The only other measures of the wide pair I am acquainted with are from the *Washington Observations* for 1863, where P=51°.5, and D=16″.83. No relative motion seems to have taken place.

Observations of the Satellites of Neptune and Uranus, made with the 26-inch Equatoreal of the U.S. Naval Observatory.

(*Communicated by Rear-Admiral C. H. Davis, Superintendent.*)

The telescope with which the following observations were made was mounted in November 1873, by the firm of Alvan Clark and Sons. The best evidence that can be given of the figure of the glass, beyond general statements, is that the two outer satellites of *Uranus* are well seen when the central portion of the glass is covered with a screen 20 inches in diameter, leaving only a ring 3 inches wide around the circumference.

Especial attention has been given to the inner satellites of *Uranus*, but the season has been exceptionally bad for the examination of such objects, owing to an almost constant precipitation of vapour in the upper regions of the atmosphere. The condition of their visibility seems to be, not so much the best definition or absence of moonlight, as the absence of all haziness or vapour having the quality of causing stray light around the planet. The best view of *Ariel* was obtained on January 28, when the nearly full moon was on the meridian and less than 48° distant from *Uranus*.

All the measures were made by the method of "double distances," that is, of the two micrometer-wires. One was made to bisect the planet, and the other the satellite. The position of the wires was then interchanged, and the bisections again made. Such a pair of readings is counted as a single measure of the double distance.

The weights are on a scale of 1 to 5; 3 indicating an average observation, 1 a very unsatisfactory one, and 5 a very good one.

Nearly all the observations were made with a power of 620. With this power the brighter satellites are very finely seen, presenting the general aspect of stars of the 4th or $4\frac{1}{2}$th magnitude to the naked eye, and in ordinary states of the atmosphere the illuminated wire can be set on the satellites with great apparent accuracy. A power of 400 was tried on a few occasions, but it was soon found that the observations were much more difficult with this power.

The distances of the satellites of *Neptune* have, through inadvertence, been given as reduced to what they would have been at the mean distance of that planet from the Sun. Those of the satellites of *Uranus* are given as measured.

1874MNRAS..35...49D

NEPTUNE'S SATELLITE.

Date	Wash. M.T.	Distance [△=30·07]	No. of Meas.	Weight.	Position-Angle.	No. of Obs.	Weight.	Observer.
1874.	h m	″			°			
Nov. 20	8 40	11·57	4	2				Newcomb
	9 0				22·1	3	2	
22	9 40	16·17	4	2	214·5	2	2	„
	9 50							
28	11 5	16·05	3	3				„
	11 20				212·8	4	3	
	11 42	15·83	2	4				
Dec. 9	9 24	11·97	4	2				„
	9 45				226·5	5	3	
	10 8	12·36	3	3				
10	7 22	16·42	5	2				„
	7 38				211·4	5	3	
	7 54	16·17	3	2				
13	9 0	15·78	3	2				
	9 8				30·7	2	1	
	9 30	15·55	3					
	9 35				31·7	2	4	
16	7 51	15·78	4	3				„
	8 2				209·8	5	3	
	8 18	15·35	5	4				
18	7 17	12·72	4	3				„
	7 32				47·1	5	3	
	8 18	13·10	4	3				
19	7 28	15·26	3	2				„
	7 36				30·6	5	3	
	7 43	15·09	3	3				
24	7 14	13·70	5	3				„
	7 30				44·1	5	4	
	7 50	14·00	5	3				
30	7 35	14·64	5	4				„
	7 52				42·2	5	3	
	8 6	14·98	5	3				
31	8 20	13·18	2	3				„
1874								
Jan. 2	7 4	15·23	5	4				„
	7 24				220·8	5	4	
	7 48	15·32	5	4				

1874MNRAS..35...49D

Date. 1874.	Wash. M.T. h m	Distance [Δ=30·07] ″	No. of Meas.	Weight.	Position-Angle. °	No. of Obs.	Weight.	Observer.
3	6 50	12·97	4	2				Newcomb
8	7 55	15·89	5	3				
	8 12				217·8	5	3	„
	8 28	16·24	5	2				
9	7 4	11·77	3	2				„
12	7 30	11·09	1	2				„
14	7 0	16·32	5	4				
	7 12				216·5	5	3	„
	7 26	16·25	5	3				
Jan. 15	6 45	10·38	5	2				
	7 0				197·3	5	1	
	7 17	10·35	5	2				„
	7 27				197·9	5	2	
17	7 14	15·97	5	5				
	7 29				36·6	5	4	„
	7 50	15·95	5	5				
29	7 5	16·38	5	2				
	7 20				34·1	5	2	„
	7 39	16·24	5	2				
31	7 23	11·70	3	2				„
Feb. 4	7 11	15·25	5	3				
	7 24				31·9	5	3	„
	8 12	15·11	5	3				
10	7 8	14·59	5	1				
	7 26				31·3	5	3	„
	7 42	14·55	2	1				

Observations of the Satellites of Uranus.

OBERON.

Date 1874	Wash. M.T. h m	Distance ″	No. of Meas.	Weight	Position-Angle °	No. of Obs.	Weight	Observer.
Jan. 8	10 33	43·53	5	3				
	11 4				351·2	3	3	Newcomb
14	10 32	45·76	4	4				
	11 10				183·3	3	3	„
17	10 30	27·77	3	4				
	11 27				106·3	3	3	„

1874MNRAS..35...49D

Date.	Wash. M.T.	Distance [Δ=30·07].	No. of Meas.	Weight.	Position-Angle.	No. of Obs.	Weight.	Observer.
1874.	h m	″			°			
Feb. 4	9 27				350·3	4	3	Newcomb
	9 37	43·65	4					
16	9 14	44·48	4					,,
	9 56				15·0	4		
18	10 30	39·65	4					,,
	10 53				339·1	3		
21	9 50	32·81	3					,,
Mar. 10	8 22	41·42	5	3				,,
	8 55				163·6	5	3	
11	8 48	34·04	5	3				,,
	9 22				139·8	5	3	
13	9 45	31·09	3	3				,,
	10 8				60·5	3	3	
14	8 21	37·95	4	4				,,
	8 48				34·5	4	3	
20	9 36	32·79	4	4				,,
	10 15				230·7	4	4	
21	7 46	39·91	4	4				,,
	8 14				208·1	4	4	
24	8 56	37·36	4	3				,,
	9 44				151·0	4	3	
28	9 1	41·81	4	2				,,
	9 38				22·1	4	2	
30	9 5	42·07	4	2				,,
	10 18				345·8	3	2	
April 4	8 4	42·26	4	3				,,
	8 36				197·1	4	2	
13	8 33				337·3	2		C. H. F. Peter
21	8 55				118·5	3	1	Holden
29	8 19	28·70	4	3				Newcomb
	8 36				247·3	4	3	
May 7	8 17	37·33	4	4				,,
	8 47				31·6	4	4	
8	8 56	42·73	4	3				,,
	9 11				9·3	4	1	
18	8 56	28·06	4	3				,,
	9 11				117·8	4	2	
19	8 25	27·67	4	2				,,
	8 50				74·9	4	4	

1874MNRAS..35...49D

Date. 1874.	Wash. M.T. h m	Distance [Δ=30·07]. ″	No. of Meas.	Weight.	Position-Angle. °	No. of Obs.	Weight.	Observer.
21	8 36	39·86	4	3				Newcomb
	9 1				20·6	4	3	
22	8 25	42·84	4	2				,,
	8 55				3·3	4	3	
26	8 57·5				243·5	4	2	,,

TITANIA.

Date. 1874.	Wash. M.T. h m	Distance [Δ=30·07]. ″	No. of Meas.	Weight.	Position-Angle. °	No. of Obs.	Weight.	Observer.
Jan. 8	10 53	21·58	4	2				,,
	11 10				258·3	3	2	
14	10 59	33·74	3					,,
	11 20				11·5	3	3	
17	10 52	23·07	3	4				,,
	11 20				238·7	3	4	
Feb. 4	9 48	28·24	4	3				,,
	10 1				215·1	4	3	
14	11 26	33·84	4	3				,,
	12 0				177·6	3	3	
16	9 25				97·3	4		,,
	9 41	97·3	4	3				
18	10 11	33·98	4	3				,,
	10 45				7·1	3		
21	10 2	24·50	3					,,
Mar. 10	8 41	21·61	5	3				,,
	9 5				259·2	5	3	
11	9 8	29·93	5	3				,,
	9 31				210·0	5	3	
13	9 58	28·04	3	3				,,
	10 14				152·0	3	3	
14	8 38	21·38	4	3				,,
	8 55				103·3	4	3	
20	9 49	31·61	4	4				,,
	10 24				200·0	4	4	
21	7 58	33·13	4	4				,,
	8 24				175·8	4	4	
24	9 12	28·67	4	3				,,
	9 55				32·5	4	3	
28	9 15	25·61	4	2				,,
	9 30				225·8	4	2	

1874MNRAS..35...49D

Date. 1874.	Wash. M.T. h m	Distance [Δ=30·07]. ″	No. of Meas.	Weight.	Position-Angle. °	No. of Obs.	Weight.	Observer.
30	9 56	30·77	4	2				Newcomb
	10 16				165·0	3	2	
April 4	8 22	26·34	4	3				,,
	8 47				323·6	4	3	
13	8 1	23·74	3	2				Holden
	7 48				311·9	4	2	
21	9 11				339·8	3	1	,,
29	7 58	32·20	4	3				Newcomb
	8 31				0·1	4	2	
May 7	8 32	30·45	4	4				,,
	8 46				18·9	4	4	
8	8 35	30·61	4					,,
	9 11				350·2	4	2	
18	8 42	20·77		3				,,
	9 8				300·1	4	2	
19	8 38	21·92	4	4				,,
	8 52				239·4	4	4	
21	8 50	31·05	4	3				,,
	9 3				174·3	4	3	
22	8 42	24·22	4	2				,,
	9 5				140·3	4	1	
26	8 49	26·69	4	2				,,

UMBRIEL.

Jan. 14	12 28	20·12	2	2				,,
	12 42				14·0	2	2	
Feb. 4	9 5	20·68	4	3				,,
	9 18				4·2	4	3	
14	11 32	19·99	4					,,
18	11 45	18·92	4					,,
Mar. 11	8 11	19·61	5	2				,,
	8 30·5				194·6	2	2	
13	9 0	19·37	4	3				,,
	9 25·6				22·7	4	2	
20	8 19	17·87	4	2				,,
	9 11·3				156·1	3	1	
24	8 35	18·75	4	2				,,
	9 36				161·8	4	2	
May 19	9 7	20·68	3	1	344·5	3	2	C. H. F. Peters

1874MNRAS..35...55W

Ariel.

Date. 1874.	Wash. M.T. h	m	Distance [Δ=30·07]. ″	No. of Meas.	Weight.	Position Angle °	No. of Obs.	Weight.	Observer.
Jan. 14	12	7	14·91	2	2				Newcomb
	12	18				176·1	3	2	
28	19	50·5	14·28	5	3				”
	11	55				351·1	5	3	
Feb. 21	9	14	14·42	3	2				”
Mar. 14	9	42	12·84	4	3				”
	9	54				28·1	4	2	
24	10	19	12·38	3	1				”
	10	26				38·9	3	2	

Comparison of the Mean Places of Standard Stars observed at Oxford in the year 1871, *with the Places given in the Berlin Astronomische Jahrbuch for* 1871. By Dr. J. Ph. Wolfers.

(*Communicated by the Radcliffe Observer.*)

Name of Star	Number of Oxford Observations.	Mean observed R.A., 1871, Jan. 1.			Tabular seconds of R.A.	Excess of observed R.A.	Number of Oxford Observations.	Mean observed Decl. 1871, Jan. 1.			Tabular seconds of Decl.	Excess of observed Decl.
		h	m	s	s	s		°	′	″	″	″
α Androm.	6	0	1	43·36	43·38	−0·02	12	+28	22	41·21	42·33	−1·12
γ Pegasi	3	0	6	35·63	35·76	−0·13	5	+14	27	59·20	58·91	+0·29
α Cassiop.	6	0	33	12·11	12·00	+0·11	15	+55	49	45 27	46·37	−1·10
[β Ceti]	3	0	37	6·64	6·78	−0·14	3	−18	41	42·53	43·34	−0·81
α Arietis	6	1	59	54·30	54·35	−0·05	9	+22	51	5·30	4·93	+0·37
[γ^2 Ceti]	3	2	36	36·99	37·13	−0·14	2	+2	41	26·29	26·45	−0·16
α Ceti	5	2	55	32·25	32·27	−0·02	6	+3	34	54·65	55·01	−0·36
[δ Arietis]	3	3	4	15·32	15·44	−0·12	4	+19	14	13·33	13·34	−0·01
α Persei	3	3	15	7·38	7·51	−0·13	6	+49	23	57·77	58·33	−0·56
α Tauri	7	4	28	31·21	31·25	−0·04	8	+16	14	51·02	52·57	−1·55
α Aurigæ	9	5	7	9·65	9·81	−0·16	10	+45	51	48·56	49·58	−1·02
β Orionis	3	5	8	20·34	20·39	−0·05	2	−8	21	9·55	10·11	−0·56
β Tauri	7	5	18	8·28	8·34	−0·06	9	+28	29	44·74	44·19	+0·55
α Canis Maj.	7	6	39	27·61	27·60	+0·01	8	−16	32	29·67	30·04	−0·37
α Geminor.	11	7	26	21·95	21·89	+0·06	23	+32	10	7·93	7·74	+0·19
α Canis Min.	15	7	32	32·85	32·78	+0·07	21	+5	33	11·20	12·45	−1·25